EPA-GE Citizen Coordinating Council
February 22, 2006
DRAFT Meeting Highlights

Opening and Introduction

Suzanne Orenstein, facilitator for the CCC, opened the meeting with introductions and an overview of the purpose and process for the meeting. A list of meeting participants is included as Attachment 1.

This meeting focused on the results of the validation process for the mathematical model that will be used by GE and EPA for evaluating the effectiveness of potential remedial alternatives during the Rest of River Corrective Measures Proposal and Study. CCC members can use the information from the presentations to prepare for the formal public comment process on the Model Validation Report scheduled to begin in early March. This comment period provides the opportunity to allow the public to comment on the report in the context of the charge questions to the Peer Review Panel, who will consider these comments in their review of the report.

Ms. Orenstein introduced Lou Kerestesy, facilitator for the Peer Review process, as the moderator and facilitator for the EPA team making the presentation to the CCC. Mr. Kerestesy introduced the technical experts presenting information in this meeting:

- Susan Svirsky, EPA Project Manager for the Rest of River
- Ed Garland of HydroQual, Inc.
- Gary Lawrence of Golder Associates
- Dick McGrath of Sleeman, Hanley and DiNitto, Inc.

The presentations covered the following model validation topics.

- Overview of the model validation process
- Watershed model validation results
- Fate and transport validation results
- Food chain model validation results
- Downstream model validation process
- Example runs
- Sensitivity and uncertainty of the model

Overview – Susan Svirsky

The model for the Rest of the River is a tool that will be used in the future to compare "what if" scenarios to evaluate the effectiveness of potential clean up options. There have been three phases of the modeling study: (1) Development of a modeling framework design, (2) Calibration of the model using a portion of the available data from studies of the river, and (3) Validation of the model by running the calibrated model for the entire 26-year period for which there is data for the river. The model validation

process evaluates the model's ability to reproduce the actual behavior of the river system over long time periods. There are three linked models used for the model framework: the Watershed Model (HSPF), the Hydrodynamic, Sediment and PCB Fate/Transport (EFDC), and the Food Chain Model (FCM). Each of the modeling study steps is subject to Peer Review. The Validation incorporated the comments from the Peer Review process for the Calibration Report. Copies of slides with details of the model validation results presented at this meeting are on the EPA web site at www.epa.gov/ne/ge.

Watershed and Fate and Transport Validation Results – Ed Garland

The HSPF watershed model considers topographical information, land use, as well as meteorological information to determine, among other things, flow and transport of suspended solids and water temperature in the Housatonic River watershed.

The EFDC model includes both the river channel and the ten year floodplain, and is one of the first modeling projects to link both parts of a watershed. For both HSPF and EFDC, the comparison of the model simulations to the data collected from the river confirmed that the model is accurately predicting the movement of water, suspended solids and PCBs through the river system.

Food Chain Model (FCM) - Gary Lawrence

The EFDC model results are used in FCM to evaluate bioaccumulation of PCBs through the aquatic foodchain. Bioaccumulation is the process by which living things accumulate contaminants from their environment. Biomagnification describes the process by which PCB concentrations progressively increase as they move up through the food chain. The model simplified the many species of invertebrates and 40 fish species in the system by representing these with three invertebrates classes and five fish species. Overall, the model is reproducing the data accurately. For example, the data and the model both demonstrate that age is an important factor in predicting PCB concentrations in fish.

Downstream Modeling – Ed Garland

The downstream modeling covers 19 miles outside the primary study area (PSA) that is located in and below Pittsfield to Lenox. It has been calculated that 90% of the PCBs in the river system are in the PSA, and of these, 60% are in the floodplain soil. The downstream model begins at the outlet of Woods Pond, includes the ten-year floodplain, and continues downstream to Rising Pond Dam in Great Barrington. The model for the downstream area was still running, and thus the validation process was not completed for this section. The variation between the PSA and the downstream area is especially challenging for the food chain model, because it stretches the bounds of the model. To address this, the model validation team identified reaches in the downstream area that correspond with reaches in the PSA, and used that data and information to run the model for the downstream area.

Example Runs –Ed Garland

To test the model as part of the validation process, example simulations were developed to determine if changes simulated by the model under two alterative hypothetical scenarios seem reasonable in the context of what is known about the Housatonic River PSA. Two scenarios were tested, and the model responded as the data would have predicted.

Sensitivity and Uncertainty –Dick McGrath

Sensitivity examines changes in the model outputs in response to changes in inputs to ensure that the model is responding properly. Uncertainty evaluates and quantifies the uncertainty in model predictions so that it can be considered when using model predictions for decision making. The example runs showed that the model is sensitive to the parameters that it is expected to be, and insensitive to some, also as expected. Given that there is uncertainty in all predictions and models, the uncertainty analysis produced reasonable results and will provide a tool for interpreting the output from future model runs.

Next Steps on Model Validation

A draft of the Model Validation Report will be produced and distributed in early March, after which the 30-day public comment period will begin. The Peer Review Panel will meet publicly during the week of June 26 to discuss the report, after which the report will be revised, as necessary, and finalized. The model will then be used by GE in evaluating potential remedial alternatives.

Other CCC Issues

Dean Tagliaferro reported that the excavation work at Newell St. II in Pittsfield is going forward and should be completed in the next 3 or 4 weeks. At that time, a decision will be made about the GE parking lot adjacent to the Western Electric site. Dean suggested that the CCC schedule an optional, informal meeting on March 15 to discuss the EPA decisions on the parking lot and other Newell St. II issues. The CCC agreed with the suggestion and the informal meeting will be held on March 15 in Pittsfield.

There will be full CCC meetings on March 30 and April 12, as previously scheduled. The March 30 meeting will focus on the results of the bench study of the Silver Lake capping proposal. The April 12 meeting will consist of a panel on capping and dredging technologies.

CCC Attendance: February 22, 2006

Name	Organization	Email Address	Attended
Members			
Thelma Barzottini	Citizens for PCB Removal		x
Barbara Cianfarini	Citizens for PCB Removal	bcianfar@hotmail.com	
Michael Carroll	GE	Michael.carroll@corporate.ge.com	x
Jeff Cook	Downtown Pittsfield	cjcook@cainhibbard.com	x
Stuart Dalheim	Lee Conservation Com.	uustuart@yahoo.com	
Shep Evans	Hous. River Restoration	shepevans@yahoo.com	x
Dick Ferren	Lenox Conservation Com.	DickFerren@aol.com	
Lynn Fowler	Housatonic River Commiss.	lynnfowler@snet.net	x
Benno Friedman	Sheffield	Benno2@verizon.net	
Stephan Green	So.Berk. Ch. Of Commerce	Stephan@clarkandgreen.com	
Tim Gray	Housatonic River Initiative	housriverkeeper@verizon.net	x
Judy Herkimer	Hous. Env. Action League	healct@snet.net	x
Charles Kilson	Schaghticoke Tribal Nation	Cekemt731@earthlink.net	
Paul Knauth	Crane, Inc.	pwknauth@crane.com	x
Rene Laubach	MA Audubon	rlaubach@massaudubon.org	x
John Lippman	Grt.Barrington Conserv.Com	jmlipp@aol.com	x
Andrew Madden	MA Dept. for Fish & Wildlife	Andrew.madden@state.ma.us	x
Jim McGrath	Pittsfield Parks Dept.	jmcgrath@pittsfield.ch.com	
Dan McGuiness	NW CT Council of Govts.	Nwccog1@snet.net	x
Susan Peterson	CT DEP	Susan.Peterson@po.state.ct.us	
Denis Regan	Housatonic Valley Assoc.	dregan@hvatoday.org	
Andy Silfer	GE	Andrew.silfer@corporate.ge.com	x
Susan Steenstrup	MA DEP	Susan.steenstrup@state.ma.us	x
Susan Svirsky	U.S. EPA	Svirsky.susan@epa.gov	x
Anna Symington	MA DEP	Anna.Symington@state.ma.us	
Dean Tagliaferro	U.S EPA	Tagliaferro.dean@epa.gov	x
Sherry White	Mohican Nation	Sherry.white@mohican-nsn.gov	
Jane Winn	Berk. Envir. Action Team	Jwinn2@berkshire.rr.com	x
Dale Young	MA Natural Res. Trustees	Dale.young@state.ma.us	
Alternates			
Angela Bonarrigo	U.S. EPA	Bonarrigo.angela@epa.gov	x
Dick Gates	GE	Richard.gates@corporate.ge.com	x
Dave Gibbs	Housatonic River Initiative	Dgibbs6@nycap.rr.com	
Bruce Philbrick	Sheffield	spgromanus@yahoo.com	
Caprice Shaw	Housatonic Valley Assoc.	cshaw@hvatoday.org	x
Others			
Bob Cianciarulo	U.S. EPA	Cianciarulo.Robert@epa.gov	x
John Kilborn	U.S. EPA	Kilborn.john@epa.gov	x
John Novotny	GE		x
Kevin Mooney	GE		x
Dick McGrath	Sleeman Hanley & DiNitto		x
Tea Quinn	Senator Nucifero's Office	Theresa.quinn@state.ma.us	X